SOME FALLACIES IN AGRICULTURAL ECONOMICS: A MACROECONOMIC INTERPRETATION

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The relevance of macroeconomic theory to the analysis of economic behavior in the agricultural sector is a recurring theme in applied research in this area. On the one hand, it is possible to find the view that the agricultural sector should be treated in isolation as an independent market or set of markets not subject to the influences of changes in monetary and fiscal policy or (other) changes in aggregate demand and supply. On the other hand, it is also possible to find literal acceptance of the usefulness of macroeconomics—perhaps in the form of a particular version of the theory—with the controversial part surfacing in the particular view of macroeconomics and how it bears on (and is influenced by) agricultural markets. The fact that this dichotomy exists is highlighted by the contrasting views expressed recently by Breimyer (1981) and Tweeten. At the same time that Breimyer advocated that "macro-economics should be struck from the lexicon," Tweeten chose to devote his AAEA Presidential address to a discussion of the implications of current developments in macroeconomic theory and policy for the agricultural sector; his particular emphasis is on the important role of "supply-side" macroeconomics.

The clear dichotomy of positions suggests it may be appropriate to review problems of widely acknowledged concern to agricultural economists and outline the potential insights that macroeconomic theory can contribute to the related research agenda. Three questions raised by Tweeten are important, because their resolution is at the heart of the macro-micro nexus facing the research of agricultural economists. These problem areas are (1) inflation and what is often labeled the "cost-price impact" faced by farmers; (2) the behavior of capital markets or the "cash-flow impact"; and, in passing, (3) the trend toward larger corporate farms, which is, apparently, a result of the cost-price and cash-flow impacts. In what follows, we address these issues in the context of how and why the consideration of elements of macroeconomic theory is helpful in achieving a complete and consistent treatment of these topics in model development and estimation.

COST-PRICE IMPACTS

At least since the publication of Popkin's paper outlining a pricing model based on stages of processing, the idea of a "cost-push" method of price determination has been popular in agricultural studies, both as a theoretical and as an empirical tool. In general, models like Popkin's argue that the price of a commodity at any point, or stage, in its transformation from a raw, primary input to a finished product can be determined as the sum of its price at the immediately lower stage of processing, plus a cost factor to reflect the value of resources expended in its transformation to its current form. Thus, a model of this form applied to the estimation of retail beef prices would include as right-hand-side variables such cost components as the carcass price of beef, food sector wage rates, transportation costs, and other costs associated with the retail food industry similar to those included in USDA's marketing bill. Recent research by Lamm, Lamm and Westcott, and Heien are examples of models based on Popkin's more general model of "cost-push" inflation.

From a model that is implicitly of this form, Tweeten argues that farmers face a cost-price squeeze, because a general inflation, of an unspecified origin, affects factor markets more quickly than output markets. In particular, he argued that inflation increases the prices paid by farmers for fertilizer, fuel, and seed more quickly than it increases the nominal prices received by farmers for their produce. This differential in the adjustment times of the nominal prices for factors of production compared to outputs suggests there are short-run real price effects of inflation that reduce the real income of farmers. But is this a reasonable scenario? At this point, we turn to a largely definitional discussion of the role of inflation, in *any* market, as a way of suggesting a research strategy that should improve (even) micro decisionmaking.

Assume for simplicity that we can invoke successfully the Composite Goods Theorem and aggregate all commodities into either agricultural (A) or nonagricultural (NA) product groups. If

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we then construct some expenditure-weighted aggregate price index, based on the expenditure shares of these two commodity groups in the value of the economy's total output and their individual price indices, we can define an initial "market basket" of the two goods as:

$$P_A^* \alpha + P_{NA}^* \beta$$

where P_A and P_{NA} denote the prices of the agricultural and nonagricultural commodities and α and β represent their shares of total output. Again, for simplicity, set $\alpha = 0.2$, $\beta = 0.8$ and give initial index values of 100 to P_A and P_{NA}. Thus, the value for the aggregate price index at the base period is defined by:

$$(0.2 * 100) + (0.8 * 100) = 20 + 80 = 100 = P_{AGG}.$$

Now, suppose the aggregate price index (P_{AGG}) in period (t+1) takes the value of 130; the objective of a model of price determination for agricultural commodities is to explain, for α fixed, why ($\alpha * P_A$) decreases (let us say) from 20 to 15 at the same time that an increase in the general price level is observed. To provide an explanation *consistent* with macroeconomic theory, it will be crucial to define inflation correctly, to outline its causes, and to distinguish between nominal and real effects. The failure to recognize these factors leads both to a misleading analysis of the impacts of inflation and, not incidentally, to incorrect (and therefore non-optimizing) microeconomic decisions. Indeed, to argue from particular prices to general inflation rates—as is often the case—is liable to confuse relative prices and nominal prices and to attribute inflation to "causes" which (may?) have no bearing on the actual events leading to inflation. Without a distinction between relative and nominal prices, it is just as likely that the existence of inflation will be attributed to symptoms of the problem rather than to its causes. A further likely result is the use of a set of policies that deal in piecemeal fashion with the *consequences* of inflation in individual markets, but do not attack the underlying *general* cause of inflation. We classify Tweeten's supply-side "macroeconomics"—admittedly based on concern for a slightly different problem—as of the latter sort.

Inflation can be defined as a sustained upward movement in nominal prices that is widely shared by the basic components of the (GNP) deflator. In principle, returning to our example for a moment, we should note that it is possible to decompose the total price change from one time period to another into the sum of a change in the *relative* price of agricultural commodities and a neutral change in the price levels of both the agricultural and nonagricultural commodity groupings. That is to say, a portion of the changes in P_A, P_{NA} and, consequently, P_{AGG} are the result of a common increase in all price levels; it is this portion of the change in P_A and P_{NA}, a neutral increase in all nominal prices, that is correctly defined as "inflation." The remainder of the change in P_A (and P_{NA}) represents a change in relative prices caused by shifts in supply and demand conditions in the agricultural and nonagricultural markets, or caused by any differential impact inflation might have on the relative price itself. Of course, there may be some interaction of a causal sort between the "inflation" component and the "relative" component of any price change, but it is important to realize that this is an *alleged* effect—of a second order of magnitude in all probability—that could only be satisfactorily measured if the components themselves are correctly measured.

Together, our definition of inflation and the foregoing discussion should clearly suggest that a one-time increase in the price of an individual commodity caused by isolated shifts in the supply and/or demand functions in that market alone is *not* correctly defined as inflation, because the change is neither sustained nor is it shared by a broad range of other commodities. Recognizing this distinction, it is clear that many of the events labeled as causes of inflation are merely one-time movements in relative prices caused by a shock to a particular market. Thus, for example, when Breimyer (1979) and others cite the ten-fold increase in OPEC oil prices as an important cause of inflation, they are on shaky ground for several reasons. The most important reason is that the price increases resulting from OPEC policy were changes in the *relative* price of oil and, patently, need not have been accompanied by any adjustment of price levels unless the Federal Reserve responded with an expansionary monetary policy. Tweeten, in fact, comments on this and attributes no more than 3 to 4 percent of the 1979 inflation to OPEC—an estimate which others (Berman, on an earlier period) would regard as excessive, perhaps because of Tweeten's use of the CPI rather than the GNP deflator. This point is especially relevant to agricultural economists who have often cited such factors as increasing beef prices as a cause of inflation when, in fact, this kind of price increase may well have a simple and correct micro-economic interpretation. Of course the distinction between changes in real and nominal values can be extended to any number of relative price movements that are therefore called, incorrectly, causes of inflation insofar as they happen to exceed the general rate of inflation.

Having made these distinctions, the task remains to define a mechanism that does tend to raise all nominal prices (*ceteris paribus*). Explaining the cause of this movement is strictly the province of macroeconomic theory, because the analysis of behavior in individual markets pro-

vides no insight into how all prices may rise simultaneously at approximately the same rate. For an analysis of this question, it is necessary to incorporate money into the model. Our introduction of money, then, is consistent with Milton Friedman's axiom that "inflation is always and everywhere a monetary phenomenon." However, this is *not* equivalent to saying that the Federal Reserve, the branch of government responsible for money creation in the United States, initiates or controls every episode of inflation. Instead, the monetary explanation of inflation only implies that money creation is the sole known stimulus that can occur continuously without upper bounds on its quantity. This is important because nominal price levels must increase as inflation. Because all other stimuli such as those associated with expansionary fiscal policies or "cost-push" price increases resulting from labor demands for higher wages *cannot* or *do not* occur continuously without at least an accommodating monetary expansion, the rate of growth of the money supply will always be directly related to the rate of change in the aggregate price level.

The proposition that inflation is solely a monetary phenomenon is, of course, an implication of the quantity theory of money. In its traditional form, the quantity theory relies on the relation between money and output. In particular, in the absence of changes in velocity, a society growing in real terms will require steadily increasing real money balances. Any excessive growth of nominal money balances will, says the theory, spill over into the price level, producing inflation. The explanation of the latter revolves around the causes of the excessive production of money, and these can be characterized as monetarist or nonmonetarist. As things stand, it is our judgment that the nonmonetarist explanations (primarily dealing with (other) changes in aggregate demand) are not strongly supported by the data. In contrast, a considerable body of empirical evidence supports the monetary linkage implied by the quantity theory. Support can be found in studies by Mehra, Berman, and Lucus. The latter notes that "both the inflation and the high interest rates of the 1970s are well accounted for by the quantity theory or, to put the same point backwards, any nonmonetary explanation of these trends would lead to large unexplained deviations from the relationships depicted [by the data]" (p. 103).

In light of the foregoing discussion, it should be clear that the "cost-price impact" affecting farmers is the result of two market phenomena that have been occurring simultaneously over recent years. On the one hand, a monetary-induced inflation (quite possibly neutral in its impact) has increased the nominal price levels of both agricultural and nonagricultural commodities.[1] To the extent that inflation is neutral, the existence of inflation, by itself, should not result in a shrinking differential between nominal farm income and the nominal cost of producing a given level of output. Instead, the "cost-price" impact of concern to agricultural producers occurs when the relative prices of farm commodities decrease in relation to the costs of factors of production. But a decline in net farm income from these sources has little to do with inflation. Shifts in the supply function for oil and oil-derivative factors (such as some fertilizers) and shifts in the demand function for crop land have increased the relative prices of these inputs and raised the relative cost of producing some agricultural commodities. On the output side of the market, relative increases in the supplies of farm produce have tended to reduce the relative prices received by farmers. The combined effect of these supply and demand shifts within individual markets has adversely affected the real income position of the agricultural sector relative to that of nonagricultural producers. But, as the analysis demonstrates, a recognition of the sources of movements in real and nominal prices does not place the blame for a "cost-price impact" on an episode of inflation.

THE CASH FLOW IMPACT

The cash flow question facing the agricultural sector centers, generally, on two issues. First, the question arises concerning whether farming operations of different sizes have equal access to capital; this issue will be important later in our discussion of the trend away from the family farm toward a smaller, concentrated number of large producers. The second cash flow issue concerns the growing volume of debt that is then used to finance investment in agricultural land. In this case, the appreciated value of land purchased is unrealized until the land is sold at its higher market value and constitutes a cash drain on the investor. To outline the role of macroeconomic theory in an analysis of these questions, it will first be necessary to review briefly how nominal interest rates are determined. Then, by using an example provided by Gardner, we can use this prototypical cash flow problem to indicate areas in which macroeconomic theory provides insights into the relationships between capital markets and economic behavior in the agricultural sector.

The discussion of interest rates requires the distinction between real and nominal rates of interest. The real rate of interest can be defined

[1] Relative gains in land values are often cited in neutrality arguments as evidence that inflation is not neutral in its impacts. However, when making such arguments, it must be recognized that land holdings and their debt financing are influenced in large part by tax laws, which offer deductions for interest payments and tax-free capital gains for some land sales. Thus, it is likely that relative gains by land values during an episode of inflation owe largely to the special treatment of land under existing tax laws.

as the expected rate of return accruing to the use of a capital good. The real rate of interest is, patently, determined by market conditions; it is also unobservable, at least directly. The nominal rate of interest given in a relationship developed by Irving Fisher states:

$$i = r + \frac{\dot{p}^e}{p}$$

where r is the real rate of interest, and the second term measures the expected (percentage) rate of inflation. If capital is expected to earn a real return of 3 percent and lenders expect a rate of inflation equal to 6 percent, the minimum value of the nominal interest rate that they will require on a loan is 3 + 6 = 9 percent. While it is difficult to test directly the validity of the Fisher relation empirically because both right-hand variables are unobservable directly, a considerable body of empirical evidence—and casual observation—strongly supports its validity (see Fisher for a survey).

The nominal interest rate and its determination are the central issues in the cash flow problem in agriculture, because it is the difference between nominal and real rates of return, combined with the inability of farmers to use the gains in the value of their land, that creates cash flow "problems" for farmers. In fact, most of the fluctuations in nominal interest rates (in recent years) result from fluctuations in actual—and therefore *expected*—inflation rates. As such, farmers making investment decisions must accurately forecast the rate of inflation over the relevant horizon of their investment. That is to say, if a farmer were to make a personal forecast of 6 percent inflation next year and secure a one-year loan at what he thought was a fair nominal interest rate of (3 + 6) = 9 percent, his decision will produce a real dollar loss to him if the rate of inflation is anything less than 6 percent during that year. It is also obvious that the gains to the individual investor are considerable, if he makes the forecast of this component accurately. To do so, he ought to use all of the information available to him, relative to what actually determines inflation; in this event, he will be forming his expectations "rationally"—as the foregoing suggests would be in his interest—and will achieve the maximum possible gain (under the circumstances). Of course, it is our contention that the quality of his decision will be adversely affected if he fails to include the (macroeconomic) monetary stimulus to inflation and relies solely on information about relative prices. This, at least, is what both the theoretical and empirical literature on rational expectations has shown. But for what follows we do not need rational expectations, and our comments apply to any general forecasting scheme, whether it produces the best results or not.

Let us, then, consider Gardner's illustration of the cash flow problem that results from any positive rate of inflation. In the example, a farmer with $100,000 in equity from land holdings decides to purchase 200 acres of additional land at a price of $1,500 per acre, or $300,000 in additional cost. The expected real rate of return on all of the land is 3 percent and the current and expected future rate of inflation is 6 percent. Thus, he secures a $300,000 loan at a nominal interest rate of 9 percent. If we assume that the expected real rate of return is fixed at 3 percent for all future periods, it is clear that the land buyer expects a rate of inflation greater than or equal to 6 percent, while the seller expects the rate of inflation to be no more than 6 percent.[2]

By performing *ex post* rate of return calculations on the farmer-investor's situation after one year of owning and using the land, Gardner produces the following results:

Current income from land in production	$12,000 [.03 * (100,000 + 300,000)]
Increase in land value	+24,000 [.06 * (100,000 + 300,000)]
Interest cost	−27,000 [.09 * 300,000]
Total return:	$ 9,000

The total return of $9,000 represents a market rate of return of 9 percent on the farmer's $100,000 equity; all estimates ignore the effects of compounding.

The cash flow "problem" results because the $24,000-return generated by a 6-percent increase in the total value of all land holdings will not be realized until the land is actually sold. In this case, the farmer has an accounting return of $9,000, but his net, realized cash return for the year is (12,000 − 27,000) or −$15,000 after the return from land appreciation is deducted. This deficit will be even larger if the farmer also attempts to repay some of the loan principal during this year. The farmer will suffer an even greater cash flow shortage if an unanticipated policy of monetary restraint reduces the rate of inflation, and subsequently, the rate of appreciation of land values below 6 percent (it would not affect his loan interest rate unless he took out a short term loan). Apparently, the farmer's cash flow deficit requires that he deal with the problem by assuming an additional debt burden (based on his gain in nominal wealth holdings), or that he increases his equity with income from other sources like

[2] Fixed values for real rates of return and nominal mortgage rates are assumed throughout as a matter of simplicity. While it is true that real rates of return do vary across the business cycle and lenders do make loans under terms of variable nominal interest rates, these complicating factors leave our fundamental point unchanged. That is, so long as there are some fixities in rate adjustment and switching between investments with varying real rates of return is not costless, farmers and other investors will incur costs associated with errors in their forecasts of expected inflation and the expected future paths of both nominal and real interest rates. Further, to reduce the magnitude and variance of these forecasting errors, it is our contention that informed investment decisions must be based, at least in part, on expectations concerning the future courses of monetary and fiscal policy.

off-farm employment. Of course, it is a situation he may well have foreseen when he undertook the loan in the first place, because all the cards (except the actual capital gain) were on the table at that time.[3]

The cause of the cash flow situation is, approximately, the existence of expected inflation and the resulting differential between nominal and real rates of interest. This can be shown by restating the previous example with the rate of inflation set equal to zero: as a result, i = r = 3 percent. In this case, the farmer secures the $300,000 loan at a market rate of interest of 3 percent. During the first year of use in production, the land yields a rate of return also equal to 3 percent, but does not appreciate the nominal value. After one year, the farmer's balance sheet for his land acquisition reads:

Current income from land in production	$12,000 [.03 * (100,000 + 300,000)]
Increase in land value	0
Interest cost	−9,000 [.03 * 300,000]
Total return:	$3,000

The total return is now a market rate of 3 percent, based on the farmer's $100,000 equity value. But no cash flow shortage occurs, because all returns from the land acquisition are realized in full in the current period and are not deferred as "paper gains" until the land is sold. As the example suggests, the existence of expected inflation, which causes nominal interest rates to increase, creates a financial management problem for farmers. This is a "problem" to those farmers who do not correctly anticipate the *mix* of gains implicit in any particular loan contract.

However, the observed pervasiveness of the cash flow problem within the farm sector has led some analysts to go further and ask if there are characteristics of capital markets that prevent or hinder the acquisition of additional debt by farmers to finance their "paper gains" from increased land values. Then, too, are cash flow deficits a problem only for farm operations of certain sizes? Is the problem rooted in a set of unique characteristics that distinguish the financial management problems of farming operations from those of firms in the nonagricultural sector? Finally, what policies, if any, might one employ to assist farmers who (apparently) find themselves short of cash?

Before we turn our attention to these questions, we repeat several assumptions that are the basis not only of this analysis, but of much of standard economic theory. These assumptions are that farmers make decisions based on an evaluation of costs and benefits at the margin and that they make these decisions based on expectations that are formed (approximately) rationally. These assumptions are stated here to make it clear that one needs to distinguish among the optimizing behavior of farmers that is possible in perfectly functioning competitive markets, non-optimal behavior in competitive markets, and optimizing behavior in non-competitive markets. That is to say, it is necessary for analysts to isolate one set of situations in which market imperfections affect farm behavior adversely and another set of adverse circumstances created by the non-optimal behavior of farmers in unconstrained, competitive markets. In the case of the former, specific policies directed at the resolution of specific market imperfections may be justified. However, if adverse situations are solely the result of farmers' lack of response to signals provided by competitive markets—including signals about ongoing inflation—policy intervention will not be justified.

By assuming rationality in forecasting, we argue that it is unreasonable to suppose that farmer-investors are unaware of the cash flow problem prior to their decision to expand their operations. Likewise, it is inconsistent with the assumptions of rational behavior that farmers do not perceive some risk factor in their calculated belief of land value appreciation at a rate of at least 6 percent (in our example). If farmers were to be observed making decisions contrary to this assumed behavior, the cash flow problem would not be the result of market imperfections, but of mistakes in judgment. In the latter case, it does not appear that public policy should be directed toward protecting the farmer from the results of his own forecasting errors any more than policy should protect the investor in the stock market who leverages his portfolio at something greater than the prime rate in anticipation of capital gains, and runs out of cash before the capital gains turn up.

We are left, then, with two legitimate causes of a cash flow problem. On the one hand, if farmers are aware of their forthcoming need to assume additional debt to finance the unrealized gains accruing to appreciated land values, the "problem" might be that such loans are just not available or are available only to some farmers (presumably, the large-scale operations). That is, if farmers are aware of the cash flow problem, their inability to assume additional debt may well be the result of imperfections in the capital market. On the other hand, if farmers are able to acquire additional financing based on their increased equity from appreciating land values, a problem

[3] If farmers do consider all information available to them prior to making an investment decision, government policies may actually *cause* the cash flow problem. To the extent that government policies have, in the past, made loans available at nominal interest rates below market rates to farmers with cash flow deficits, farmers may expand their operations in full anticipation of both cash flow problem *and* the acquisition of a subsidized low interest loan to cover the cash deficit. In such a case, farmers make an investment decision based not only on their expectations of future rates of inflation, but also on their expectations concerning the future course of government policy toward the provision of subsidized loans.

could result if farmers made systematic errors in their forecasts of future rates of inflation, perhaps because macroeconomic policy is not easy to predict. In this case, farmers might decide to expand on the basis of a decision calculus that provides a correct analysis subject to the data available at the time of their investments. Thus, the inability of farmers to forecast accurately future rates of inflation, or, alternatively, the systematic forecasting errors of farmers, is another possible source of the cash flow problem. We now address the likelihood of finding such market imperfections in practice.

Differential Access to Capital

Implicit in Tweeten's discussion of the cash flow problem is the often-voiced concern that loans will not be available to farmers for the financing of additional debt on increased equity values, or, if such money is available, it will generally be available only to large-scale farm operations. If the argument is made that only the large farm operations will be able to manage a cash flow squeeze, this differential access to capital will likely "accelerate [the trend] toward farmland ownership and operation by part-time farmers, corporate conglomerates and established, wealthy commercial farms (Tweeten, p. 860)." However, the question to be answered is whether the observed trend toward fewer and larger farms is the result of imperfections in the capital market that deny additional equity-based debt to some or all farmers, or if the trend is the natural outcome of competitive behavior in unconstrained competitive markets, possibly subject to unexploited economies of scale or technological change that favors larger size operations. We hope that it is abundantly clear that we feel the latter two factors are the likely ones.

Certainly it is true that some firms cannot *afford* to finance projects at current market rates of interest; on the other hand, if a farm operator actually can afford to pay the market interest rate and the money actually is available to lend, why would a lender refuse his loan unless a risk differential, associated with different prospective borrowers, exists? The failure to lend to someone who wants to borrow at the going rate may well reflect the quality of the collateral and other (relevant) characteristics of the borrower—factors of relevance to a lender—which do not imply discrimination. Indeed, if this were the case, the capital market still would be functioning perfectly, and it would be more appropriate to define the capital acquisition problem as a result of an incorrect assessment by farm operators of the rate of interest at which they could obtain additional financing, rather than as a policy-inspiring imperfection. Similar comments apply to the alleged ability of large-scale operators to self-finance, because even large farm operators face opportunity costs associated with the use of their liquid assets in this way. That is to say, unless a self-financed project is expected to bear a yield higher than the return obtainable elsewhere—*including lending money to other farmers*—the project should not be undertaken.

Forecasting Farmers' Errors

Another problem for farmers considering an expansion or the assumption of additional debt is the possibility of error in their forecasts of inflation. As our earlier example illustrated, if realized inflation is less than its expected value at the time a fixed interest loan is acquired, the total rate of return on the investment will be less than the nominal market rate of interest. Thus, the existing cash flow situation will be exacerbated by the "failure" of farm equity to appreciate at a rate sufficient to yield at least a market rate of return. But are these forecasting errors a market imperfection? Are they associated with the decisions of all farmers and farm operations of all sizes? Are they made systematically over time?

If farmers are rational economic agents and make decisions within a rational expectations framework, the answer to each of these questions is "No." To review the argument briefly, it is rational for all economic agents to acquire information relevant to a decision until the marginal benefit of additional information is equal to the cost of its acquisition. But information is not a free good and, therefore, it will not be rational (or even possible) to collect all information that could affect a given decision. As Stigler argues, "information costs are the costs of transportation from ignorance to omniscience, and seldom can a trader afford to take the entire trip (p. 291)." Since it is neither rational nor possible to acquire perfect knowledge to forecast likely economic behavior, uncertainty will exist and forecasting errors will be made. Hart has called uncertainty a market imperfection, and those who advocate policies to reduce the risk faced by farmers under inflation apparently share his view of how markets should function. However, as Stigler replies, calling uncertainty a market imperfection is akin to saying that "it is an imperfection in a wheat seed that it does not grow into nicely baked bread (p. 289)."

We can see the reason for this by referring again to our assumption of rational decisionmaking. For such arguments as Hart's to be valid, it must be stated that either borrowers or lenders have the better market information and can forecast future economic behavior more accurately. If this were true, the party with better information could systematically "exploit" the other traders by engaging in a form of arbitrage. That is, this party could acquire funds at the market rate, reinvest at what it knows will yield a higher rate of return, and pocket the difference between these two rates. While uncertainty and forecasting errors are likely to create such possibilities in

the short run, a policy-inducing market imperfection would not exist unless this situation were an ongoing and systematic operation. However, the assumption of rational behavior generally rules out this possibility, because it is unlikely that the economic agents who have a vested interest in the market in question will not learn from experience and alter their behavior accordingly.

The final result is that there is no particular reason to expect that larger farms make decisions on better information and gain a competitive advantage in the capital market, but certainly that is what one must argue (and prove) if the "discrimination" case is to stick. In sum, the cash flow problem is not a problem if farmers behave as rational economic agents and base decisions to expand or acquire debt on a correct assessment of costs and benefits at the margin. Of course, these costs include an assessment of future inflation rates—and that involves macroeconomics.

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